

**UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
SAN ANTONIO DIVISION**

WAVE NEUROSCIENCE, INC. a Delaware
Corporation,

Plaintiff,

vs.

BRAIN FREQUENCY LLC, a Texas Limited
Liability Company

Defendant.

Case No. 5:23-CV-00626-XR

Honorable: Xavier Rodriguez

**PLAINTIFF WAVE NEUROSCIENCE, INC.’S REPLY TO RESPONSE TO MOTION
TO STRIKE THE DECLARATION OF DR. JARED DEMPSEY**

Plaintiff Wave Neuroscience, Inc. (“Wave”) submits the following Reply to Brain Frequency LLC’s (“Brain Frequency”) Response (Doc. No. 42) to Wave’s motion to strike (Doc. No. 39) the Declaration of Dr. Jared Dempsey (Doc. No. 34-1) filed by defendant Brain Frequency in support of its Opening Claim Construction Brief (Doc. No. 34) and any citations to Dr. Dempsey’s Declaration cited therein.¹

I. INTRODUCTION

With the admissibility of its proffered expert’s testimony on the line, Brain Frequency again fails to carry its burden, unable to show Dr. Jared Dempsey (“Dr. Dempsey”) has the

¹ Defendant subsequently filed a Supplemental Declaration from Dr. Dempsey in support of its Reply in support of its Opening Claim Construction brief. *See* Doc No. 40-1. Wave further requests the Court strike Dr. Dempsey’s Supplemental Declaration for the same reasons it should strike Dr. Dempsey’s Opening Expert Declaration. If needed, Wave is willing to file a second, separate motion to strike Dr. Dempsey’s supplemental report.

knowledge, skill, experience, training, or education to qualify as its defined Person of Ordinary Skill in the Art (“POSITA”). Rather than plainly listing the training and experience Brain Frequency contends Dr. Dempsey has to meet the requisite “advanced training and experience in use of either EEG or TMS technology,” it merely recites Dr. Dempsey’s resume and again summarily concludes he qualifies as a POSITA.

Brain Frequency’s Opposition does nothing to answer the questions that resulted in Wave moving to strike Dr. Dempsey’s testimony in the first place. In an attempt to show Dr. Dempsey meets the qualifications of a POSITA, Brain Frequency relies on a “comprehensive study on TMS treatment and its impact on substance use disorders” where Dr. Dempsey was the “primary investigator.” (Doc. No. 42 at p. 7.) But this study was raised by Wave in its Motion (Doc. No. 39, p. 11), and Wave demonstrated Dr. Dempsey’s curriculum vitae, as stated, did not provide information sufficient to support the claim the study imparted Dr. Dempsey with the requisite training and experience on the use of TMS technology. Brain Frequency’s opposition did nothing to cure that deficiency. In actuality, the Opposition worsened its position, stating the study included the “efficacy and impact of TMS treatment” (Doc. No. 42 at p. 8)—seeming to state Dr. Dempsey was involved in analyzing results of treatments, and not *using* the TMS technology; otherwise Brain Frequency would have simply stated he was using TMS technology, which it very clearly did not.

Rather, Brain Frequency attempts to improperly shift its burden, by claiming Wave should have conducted Dr. Dempsey’s deposition to resolve issues with his qualifications (Doc. No. 42, pp. 2, 7 fn. 2). Unsurprisingly, Brain Frequency offered no authority to support this contention. Nor could it. Brain Frequency carries the burden to demonstrate Dr. Dempsey is qualified for his opinions to be admissible. Fed. R. Evid. 702; *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579,

590–91 (1993). Brain Frequency’s argument is, at best contradictory; on the one hand inaccurately stating Dr. Dempsey is qualified while, on the other hand, simultaneously attempting to blame the lack of evidence in training and experience in the use of TMS technology on Wave. Regardless of its efforts to distract from the key issue, Brain Frequency cannot run from the inescapable fact that it failed, despite multiple opportunities afforded by Wave, to proffer any evidence (its burden), including in Dr. Dempsey’s Declaration (Doc. No. 34-1), his curriculum vitae (*id.* at Ex. A), his Supplemental Declaration (Doc. No. 42-1), his revised curriculum vitae (*id.* at Ex. A) during meet and confer discussions (Doc No. 39-4), and in its Response (Doc. No. 42), that Dr. Dempsey meets even Defendant’s lower requirements to qualify as a POSITA in this case.

Brain Frequency also fails to address many of Dr. Dempsey’s conclusory opinions, and apparently concedes his failure to evaluate extrinsic evidence by not offering any argument or evidence to the contrary. This is fatal to its argument the opinions are reliable.

And while Brain Frequency contends, without any supporting evidence, that Dr. Dempsey’s undisclosed, on-going business relationship with Windmill Wellness Ranch (which shares ownership with Brain Frequency, and is not just a former defendant in this lawsuit), does not create a bias, it offers no reason why this information was concealed from Wave and the Court. Brain Frequency also posits Dr. Dempsey’s perceived bias goes to the weight of his testimony, but that could only be true if he was qualified, and his testimony admissible.

That Dr. Dempsey may be a highly qualified neuroscientist does not in itself qualify him as a POSITA as Brain Frequency would have this Court believe. Had it, Brain Frequency would have submitted evidence that Dr. Dempsey possesses training and experience in use of EEG or TMS technology – required under Brain Frequency’s own definition; but it does not. Because Brain Frequency has not evidenced any training or experience using TMS technology, Dr.

Dempsey's opinions are unsupported, and because he has an undisclosed relationship with Plaintiff, his testimony should be stricken.

II. BRAIN FREQUENCY IS NOT ABLE TO EVIDENCE DR. DEMPSEY HAS THE RELEVANT TRAINING AND EXPERIENCE IN EEG OR TMS TECHNOLOGY

It is Brain Frequency's burden to establish its proffered expert qualifies to offer opinions as an expert. Fed. R. Evid. 702; *Daubert v. Merrell Dow Pharms. Inc.*, 509 U.S. 579, 590–91 (1993). By its own definition, to qualify as, and thus to offer opinions from the perspective of, a POSITA, Dr. Dempsey must have, in part, “advanced training and experience in use of either EEG or TMS technology.” (Doc. No. 34-1, ¶ 16.)

Brain Frequency argues Dr. Dempsey's experience on the patented technology at issue includes just: (1.) training students on the use of neuroimaging, EEG, advanced statistical analytics, and signal processing and cleaning; and (2.) as the primary investigator on a study on TMS treatment and its impact on substance use disorders. (Doc. No. 42 at p. 7.) It should be noted this “experience” that Brain Frequency now relies to relate Dr. Dempsey's experience to the patented technology was *not* in his original declaration (Doc. No. 34-1), and was only first included in his Supplemental Declaration (Doc. No. 42-1), which was signed on June 7, 2024, after Wave met and conferred with Brain Frequency and filed its Motion to Strike (Doc. No. 39).

Making the timing even more problematic is the complete absence of *any* detail that could properly inform this Court of Dr. Dempsey's actual training and experience on the use of EEG or TMS technology. For instance, what specifically did Dr. Dempsey train students on with respect to EEG? Was it on the use of the technology, or how to read results? The context of the statement indicates the latter. The same is true for his role as primary investigator in the two-year study. Was Dr. Dempsey *using* the TMS, or only evaluating the effect of TMS on individuals with substance use disorders as the Response states (Doc. No 42 at p. 8). And, importantly, how much *time* did

Dr. Dempsey spend training students or on the two-year study. The study purportedly occurred between May 2022 and April 2024. During this same period, Dr. Dempsey’s curriculum vitae states he was the Chief Scientist and Co-Founder of Trac9.com, the Chief Science Officer and Co-Founder of Recovery Science, LLC, and the Chief Science Officer and Co-Founder of NLW Partners, LLC. (Doc No. 34-1 at p. 14.)

Ultimately, when given the opportunity, Brain Frequency again is unable to evidence that Dr. Dempsey qualifies under its own definition of the applicable POSITA. If Dr. Dempsey had the requisite experience, Brain Frequency would have set it forth in great detail. That it needed to *add* to his curriculum vitae to relate to the “patented technology” and could not do so with detail should be determinative of this issue.

III. BRAIN FREQUENCY DID NOT ADEQUATELY ADDRESS DR. DEMPSEY’S FAILURE TO PROVIDE MEANINGFUL ANALYSIS OR FAILURE TO CONSIDER EXTRINSIC EVIDENCE

Brain Frequency’s Response does not adequately refute Wave’s arguments that Dr. Dempsey’s analysis was conclusory. At the outset, Brain Frequency does not dispute that Dr. Dempsey failed to consider extrinsic evidence after he opined the intrinsic evidence did not instruct on the exact meaning of claim terms. *See Digital Biometrics v. Identix, Inc.*, 149 F.3d 1335, 1344 (Fed. Cir. 1998) (“[I]f after consideration of the intrinsic evidence there remains doubt as to the exact meaning of the claim terms, consideration of extrinsic evidence may be necessary to determine the proper construction.”) Simply put, Dr. Dempsey only looked (minimally) at *intrinsic* evidence, failing to discuss dictionaries or treatises. *See Suffolk Techs., LLC v. AOL Inc.*, 752 F.3d 1358, 1362 (Fed. Cir. 2014); *see also Markman*, 52 F.3d at 980; *Starhome GmbH v. AT&T Mobility LLC*, 743 F.3d 849, 856 (Fed. Cir. 2014).

Moreover, despite Brain Frequency’s claim of the alternative (Doc No. 42 at p. 8), Wave raised not less than six (6) such examples of conclusory opinions, unsupported by analysis (Doc.

No. 39 at p. 13, citing Doc. No 34-1 ¶¶ 19, 24, 27, 30, 33, 39), not one of which was addressed by Brain Frequency in its Response. As an example of one such opinion, in his very first Claim Construction Opinion, Dr. Dempsey testifies on “Improving A Physiological Condition or a Neuropsychiatric Condition” as follows:

18. Claim 1 of the ‘111 Patent states: “A method of improving a physiological condition or a neuropsychiatric condition of a mammal which comprises subjecting the mammal to repetitive transcranial magnetic stimulation (rTMS) at a frequency of a non-EEG biological metric or an harmonic or sub-harmonic of said non-EEG biological metric, wherein the mammal is a human.” However, a POSITA would not understand with reasonable certainty how to improve such conditions.

19 . The patent specification does not provide sufficient guidance regarding how to quantify such improvement, or even how to determine whether any such improvement (or even change) in the condition is related to the claimed treatment. Nor does the ‘111 Patent explain how to measure such an improvement, determine the cause of such an improvement, or to what degree such a condition is improved.

(Doc. No. 34-1 at ¶¶ 18-19.) Dr. Dempsey’s declaration is conclusory and fails to provide *any* analysis other than to say the patent does not “provide sufficient guidance” or “explain how to measure such improvement.” Simply, Dr. Dempsey fails to explain *why* a POSITA would not understand the term. Even if Dr. Dempsey *had* attempted to explain why a POSITA would not understand the meaning, it would have little meaning considering he, himself, has failed to establish that he possesses the minimum training and experience necessary to offer such opinions. The result is a conclusory, unreliable opinion.

Brain Frequency did not address this opinion, or any of the many raised by Wave in its Motion. Instead, Brain Frequency inexplicably and incorrectly complains that Wave did not “include Dr. Dempsey’s actual declarations”² (Doc. No. 42 at p. 8), and

² Dr. Dempsey’s Declaration and curriculum vitae are part of the record of the case at Document Number 34-1, which Wave consistently cited to in its Motion. Further, Dr. Dempsey’s revised curriculum vitae was included as Exhibit D to the Declaration of J. Rick Taché (Doc. No. 39-5). It was impossible for Wave to cite to Dr. Dempsey’s Supplemental Declaration since it was not submitted until *after* Wave filed its Motion.

Brain Frequency cites an example of where Dr. Dempsey supposedly *did* provide analysis (Doc. No. 42 at p. 8), but that fares no better. Dr. Dempsey's discussion on "Intrinsic Frequency" follows:

20. The term intrinsic frequency is not a term of art and has no ordinary meaning.

21. However, the Asserted Common Patents do provide an explicit definition of intrinsic frequency: "the frequency (f_0) at which peak signal power in the specified band (E_{\max}) is located." '490 Patent, 22: 19-29.

22. This is clearly explained in Figure 12 of the '490 Patent:

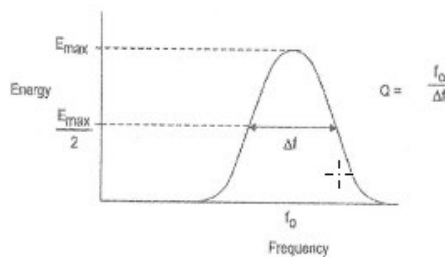


FIG. 12

23. In this example, f_0 is the intrinsic frequency in the specified band. It is where peak signal power in the specified band is located.

24. However, as with the case with the '111 Patent, a POSITA would not know what the meaning of intrinsic frequency as it is not defined in that patent.

(Doc. No. 34-1 at ¶¶ 20-24.)

In this example provided by Brain Frequency, Dr. Dempsey is again summarily concluding a POSITA would not know the meaning of a claim term because "it is not defined in the patent." In fact, throughout Dr. Dempsey's Declaration, no analysis is provided on *why* a POSITA would not understand the meaning (other than to say it is not explicitly defined in the patent) and *no* analysis of intrinsic evidence is conducted, as required.

Dr. Dempsey has also failed, where appropriate, to undertake the second step of evaluating extrinsic evidence in those instances where he concludes the exact meaning remains in doubt

following review of the intrinsic evidence. Dr. Dempsey also failed to provide perspective, consideration, and analysis of a POSITA. His opinions are conclusory and not useful or reliable.

IV. DR. DEMPSEY'S UNDISCLOSED RELATIONSHIP WAS NOT DISPUTED

Brain Frequency did not dispute the company co-founded by Dr. Dempsey has an ongoing business relationship with Shannon Malish and Julia Cline's (Members of Brain Frequency) Windmill Wellness Ranch. It also did not attempt to dispel the notion Dr. Dempsey has personal relationships with Mses. Malish and Cline. These pre-existing relationships remove Dr. Dempsey's opinions as those of a neutral party because they are biased. And his bias is exacerbated by not being qualified to offer opinions as a POSITA. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005).

While what is currently known of Dr. Dempsey's undisclosed relationship with Mses. Malish and Cline may not rise to the level of exclusion at present if viewed in a vacuum, considering also his lack of qualifications and unsupported opinions, on aggregate, is more than sufficient evidence for his testimony to be stricken.

V. CONCLUSION

For all the reasons above, Wave respectfully requests the Court strike the Declaration of Dr. Jared Dempsey submitted by Brain Frequency (Doc. 34-1), and all citations to Dr. Dempsey's Declaration in Brain Frequency's Claim Construction Briefs (Doc. No. 34).

DATED: June 27, 2024 Respectfully submitted,

/s/ J. Rick Taché

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that counsel of record who are deemed to have consented to electronic services are being served with a copy of this document via the Court's CM/ECF system per Local Rule CV-5(a) on June 27, 2024.

/s/ J. Rick Taché

J. Rick Taché